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SECRET

SURVEY OF SOVIET REGIONAL STATIONS FROM TURKEY AND IRAN

13th December 1956 - 4th January, 1957

The report on the Iranian Survey is given first although chronologically this was preceded by the survey from Turkey.

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A. SURVEY OF SOVIET REGIONAL STATIONS FROM IRAN

(23rd December 1956 - 4th January 1957)

Reception Conditions

Tehran and Gulhek are both screened by a very high mountain range in the north. It was feared that this factor would affect reception conditions materially, but on the whole these fears proved unfounded. Tehran's and Gulhek's altitudes (3,800 and 4,700 ft. respectively) constitute an advantage, and although medium-wave reception is poor from approximately 0400 till 1200 (GMT), it is good during the remaining hours. Long-wave reception remains fairly good throughout day and night. The time difference between Iran and, say, Stockholm is a factor of extreme importance as far as coverage of the more remote equidistant stations is concerned. Kuibyshev for example is at present audible at Stockholm at 0345 GMT - i.e. in conditions of darkness there - but inaudible at other times. The same station is not very well received at 0345 GMT in Iran as daylight starts at approximately 0315 GMT, but can be fully covered later in the day when some of the most productive programmes are broadcast. In cases of this sort coverage from Stockholm and Iran would be complementary.

Advantages of Interception in Iran

Interception of Soviet regional stations in Iran offers certain advantages and these can be conveniently considered under three headings:

- (1) Transmitters of Republican Capitals in the Caucasus and Central Asia.
- (2) Short-wave Transmitters of remote Provincial Centres in Soviet Asia.
- (3) Other Stations inaudible or only partially audible in Caversham, Stockholm or Cyprus.

(1) Transmitters of Republican Capitals in the Caucasus and Central Asia.

Broadcasts from the Republican capitals in the Caucasus and Central Asia generally were very well received at Gulhek throughout the day. Thus 100 per cent coverage of Ashkhabad, Stalinabad and Tashkent is possible from Iran during the winter. Summer conditions will naturally affect reception from all these stations, but it is possible that they will further emphasize the advantages of the listening site in Iran as compared with that in Cyprus for certain stations. The following differences in winter reception conditions were established:

<u>Station</u>	<u>Cyprus Reception</u>	<u>Gulhek Reception</u>
Ashkhabad	Unmonitorable 0600-1130	Satisfactory, but on the whole this period is unproductive.
Stalinabad	Unmonitorable 0600-1130	Quite good on the whole; this period may contain some useful material.

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Tashkent	Unmonitorable 0600-1230	Good, but this period appears to be unproductive.
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(2) Short-Wave Transmitters of remote Provincial Centres in Soviet Asia.

The survey has thrown light on an aspect of broadcasting in the remoter areas of Soviet Asia which has not been fully appreciated in the past. It has been found that a fair number of broadcasting services in these parts of the Soviet Union are maintained with the aid of short-wave transmitters (some of low power) which appear to be situated at various provincial centres. These operate for very short periods of the day and, as a rule, broadcast both in Russian and the local language. Apart from those already known, the following stations were heard, but it is likely that prolonged operations would reveal others:

Pavlodar	on approx. 4080 kc/s.	Operating 1200-1305 Mediocre reception
Petropavlovsk (Kazakhstan)	on approx. 5090 kc/s.	Operating 1300-1400 Good reception.
Kokchetav	on approx. 5090 kc/s.	Operating 1400-1445 Fair reception.
Tyumen	on approx. 5700 kc/s.	Operating 0320-0345 and 1230-1300 Very good reception
Unidentified (possibly Karaganda)	on approx. 7055 kc/s.	Operating 1230-1400 (or 1430) Reception varies according to proximity of Cairo frequency.

As already known, some of the stations in this category also contribute studio programmes to medium or long-wave services of large broadcasting centres, e.g. Omsk, but these are not always audible outside the Soviet Union.

It might be mentioned here that on New Year's Eve Tyumen carried relays from Khanty-Mansiysk and Salekhard in the extreme North.

(3) Other Stations inaudible or only partially audible in Caversham, Stockholm or Cyprus.

The survey revealed that a number of fairly important Soviet stations north and north-east of Gulhek were better received there than at any other established listening post. Reception conditions at Gulhek compared with those in Cyprus as follows:

<u>Station</u>	<u>Cyprus Reception</u>	<u>Gulhek Reception</u>
Astrakhan	Suffers from interference from 1500 and completely obliterated when Cyprus jammers active.	Good: it should be noted that the most productive programme begins at 1500.

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Kuibyshev	Practically unmonitorable owing to Skoplje transmissions.	Quite good from 1430 which includes the most productive programmes.
Nukus	Unreliable owing to fading	On the whole fair
Ordzhonikidze	Unmonitorable	On the whole quite good.
Stalingrad	Unmonitorable	On the whole quite good.
Ufa	Blotted out when Nicosia transmitter on the air	Very heavy interference from Nicosia, but not always totally blotted out; improved aerials might be effective.

Observations in the course of the survey seem to confirm the importance attached to Kuibyshev and Stalingrad as both stations appeared to include a considerable proportion of industrial items in their programmes.

Novosibirsk should be considered in a separate category, its network comprising both a long-wave and a short-wave transmitter. The latter, when operative, is well received at Gulhek, while reports from Cyprus indicate that no Novosibirsk programmes are monitorable there between 0300 and 1230 GMT. It must be borne in mind, however, that transmissions from Novosibirsk are monitorable at other listening posts during certain periods.

Recommendation

The above observations are, of course, based on winter conditions. Bearing this in mind, it is recommended that an experimental recording operation covering six months should be conducted in Iran. Its objects would be:

- (1) To review the value of material hitherto unobtainable from other listening posts.
- (2) Further to investigate the existence of other short-wave transmitters situated at remote provincial centres in Soviet Asia.
- (3) To obtain a picture of reception conditions during the summer months.

The period under review should include both winter and summer months if optimum results are to be achieved.

B. SURVEY OF SOVIET REGIONAL STATIONS FROM TURKEY

(13th December - 21st December, 1956)

Reception Conditions

Reception conditions generally at Ankara seem not unfavourable. The proximity of European and Middle Eastern transmitters naturally presents an obstacle as far as interception of Soviet Regional stations is concerned, but the general atmospheric conditions (altitude of app. 3,000 ft.) offer an advantage which should not be overlooked. The contrast with the disturbed atmospheric conditions in Cyprus is very marked indeed.

Advantages of Interception in Ankara

Reception of Soviet regional stations at Ankara was compared with that in Cyprus, and the following advantages relating mainly to stations comparatively near Turkey were noted:

<u>Station</u>	<u>Cyprus reception</u>	<u>Ankara reception</u>
Astrakhan	Suffers from interference from 1500 and completely obliterated when Cyprus jammers active.	On the whole good: it should be noted that the most productive programme begins at 1500.
Chernovtsy	Unmonitorable 0800-1300 owing to Jerusalem transmissions.	On the whole quite good, but 0800-1300 period appears to be unproductive.
Kharkov (with studios at Belgorod, Orel, Sumy, Kursk, Poltava)	Somewhat variable.	On the whole fair.
Krasnodar (with studio at Maikop)	Largely unmonitorable during Sarajevo transmissions.	Suffers considerably from Sarajevo transmissions, but could probably be separated to some extent with improved aerials.
Nalchik	Very poor	Poor, but could be intelligible in parts with improved aerials.
Saratov (with studios at Balashov, Tambov, Pensa)	Unmonitorable 0400-1330	Rather poor, but not always unmonitorable 0400-1330.
Stalingrad	Unmonitorable	Variable; partly quite good, although suffers a good deal from Cairo transmissions.
Voronezh (with studio at Lipetsk)	Unmonitorable 0430-1000 owing to Cairo transmissions.	Suffers from Cairo interference but can be largely separated.

Conclusion

From the above it appears that practically no advantage would be derived by covering Chernovtsy from Ankara.

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Coverage of Kharkov and Nalchik would be advantageous, but it is felt that the amount of additional material yielded by this operation would be comparatively small.

The advantage of Ankara as an interception site in the case of Saratov and Voronezh is governed by the availability of Stockholm as an additional listening post. The early morning transmissions of both stations - unmonitored in Cyprus - are audible in Stockholm (during the winter), but in the case of Voronezh there is probably also a certain amount of quite useful material which is at present inaudible both in Cyprus and Stockholm.

Coverage of Stalingrad from Ankara is likely to produce useful results but it should be noted that this would be by no means comprehensive.

Observations relating to Astrakhan and Krasnodar seem fairly promising by comparison with Cyprus, and improved technical facilities might produce useful results.

It must be stressed that all these observations are based on winter conditions, and that the conclusions above may have to be modified in the light of experience during the summer.

Recommendation

On the basis of these results, it is felt that the establishment of a listening post manned by BBC personnel in Ankara is not justified, as long as Soviet regional coverage is maintained from Cyprus.

In view of reception conditions observed in Iran it appears that both Astrakhan and Stalingrad are more advantageously covered from Gulhek than Ankara. This leaves only Krasnodar and, possibly, Saratov and Voronezh as useful targets - the latter two particularly if operations in Stockholm were to be discontinued.

A temporary recording operation from Ankara might prove useful in special cases when local developments and seasonal reception conditions combine to create circumstances warranting a special effort of this kind, and this possibility should be borne in mind.